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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/782,239	02/13/2001	Toshimitsu Konuma	SEL 239	9357

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EXAMINER

WILLE, DOUGLAS A

ART UNIT PAPER NUMBER

2814

DATE MAILED: 02/19/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/782,239

Applicant(s)

KONUMA ET AL.

Examiner

Douglas A Wille

Art Unit

2814

-- **Th MAILING DATE of this communication appears on the cover sheet with the corresponding address --**
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 January 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7, 15-28, 30, 31, 33-42, 44, 45, 51-57 and 64-84 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

- 5) ☐ Claim(s) _____ is/are allowed.

- 6) ☒ Claim(s) 1-7, 15-28, 30, 31, 33-42, 44, 45, 51-57 and 64-84 is/are rejected.

- 7) ☐ Claim(s) _____ is/are objected to.

- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 12. 6) ☐ Other: _____

DETAILED ACTION

Finality

1. Finality of the prior office Action is withdrawn and prosecution is reopened.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 6, 21, 28 and 35 – 37 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The claims show that the surface is planarized to be flush but, in fact, there is no planarization process shown in the specification and second, the surface is not flush since it is shown as being as high as 1 micron.

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claim 64 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

6. Claim 64 depends on claim 11 which has been cancelled.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. Claims 5, 22, 23, 26 – 28, 38 and 57 are rejected under 35 U.S.C. 102(e) as being anticipated by Hamada.

9. With respect to claims 5 and 22, Hamada shows switching elements 43 with an insulating layer 2 (column 5, line 32) between pixel electrodes 103 with a third electrode 108.

10. With respect to claim 23, element 43 is a TFT.

11. With respect to claim 26, electrode 108 is a cathode.

12. With respect to claim 27, the electroluminescent material is organic (column 5, line 32).

13. With respect to claims 28 and 38, the layer 2 is substantially flush.

14. With respect to claim 57, the Hamada electroluminescent material is organic.

Claim Rejections - 35 USC § 103

15. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

16. Claims 1 – 4, 6, 7, 15, 16, 18 – 21, 30, 33, 35 – 37, 39 – 42, 44, 51, 53 – 56 and 65 - 84 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hamada in view of Wolf and Kobayashi et al.

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17. With respect to claims 1 – 4, and 15, Hamada shows an electroluminescent display (see cover Figure and column 5, line 20) with a TFT 43, a pixel electrode 103, a light emitting layer 104 – 107, an electrode 108 over the light emitting layer where the pixel electrode has a hole and the pixel electrode is connected to the TFT. Hamada does not show the hole being filled with an insulator but Wolf shows that it is important to planarize the surface (page 201, paragraph 4.4.1.2) with a dielectric. Kobayashi et al. shows that a hydrogen silsesquioxane resin is useful as a planarizing coating. It would have been obvious to modify the Hamada device to include the planarization shown by Wolf for the advantage shown and to use the silsesquioxane resin shown by Kobayashi et al. since it is known to be useful. With respect to the placement of the cathode and anode, Hamada shows the anode as being layer 108 but it would have been obvious to interchange the cathode and anode as a design alternative.
18. With respect to claims 6, 21 and 35 - 37, as noted above the fill would be flush since it is planarized.
19. With respect to claim 7, 39 - 42 and 44, 51, the Hamada device is a display.
20. With respect to claim 16, the transistor 43 is a TFT.
21. With respect to claims 18 and 19, the designation of anode and cathode is arbitrary and it would be obvious to select either polarity.
22. With respect to claim 20 and 53 – 56, the Hamada electroluminescent material is organic.
23. With respect to claims 30, 33, it would be obvious to use the display in any device requiring a display.

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24. With respect to claims 65 – 69, Hamada shows the flattening film could be polyimide or acrylic (column 8, line 39).

25. With respect to claim 70 – 74, Kobayashi et al. shows siloxanes and their use would be obvious as a design choice.

26. With respect to claims 75 – 79, it would be obvious to use any siloxane.

27. With respect to claims 80 – 84, it would be obvious to adjust the viscosity to a value commensurate with the desired film thickness and spin conditions.

28. Claims 25, 31, 34, 45 and 52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hamada.

29. With respect to claim 25, the designation of anode and cathode is arbitrary and it would be obvious to select either polarity.

30. With respect to claims 31, 34 and 45 it would be obvious to use the display in any device requiring a display.

31. With respect to claim 52, the Hamada device is a display.

32. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hamada in view of Wolf and Kobayashi et al. and further in view of Shi et al.

33. Shi et al. show an OED array (see Figure 2 and column 3, line 6) with transistors 6 in the substrate. It would have been obvious to form the devices in the substrate as shown by Shi et al. to take advantage of the superior transistor quality of bulk devices.

34. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hamada in view of Shi et al.

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35. Shi et al. show an OED array (see Figure 2 and column 3, line 6) with transistors 6 in the substrate. It would have been obvious to form the devices in the substrate as shown by Shi et al. to take advantage of the superior transistor quality of bulk devices.

Response to Arguments

36. Applicant's arguments with respect to claims have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Douglas A Wille whose telephone number is (703) 308-4949. The examiner can normally be reached on M-F (6:15-3:45).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wael Fahmy can be reached on (703) 308-4918. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.



Douglas A. Wille
Patent Examiner

February 10, 2003